

**What is claimed is:**

1. A process for preparing nitrogen trifluoride, comprising fluorination of nitrogen-containing compounds with elemental fluorine, wherein said fluorination is carried out in anhydrous hydrogen fluoride at a temperature of -20°C to 0°C and with the  
5 molar ratio of said fluorine to said starting nitrogen-containing compounds of not over 3.

2. The process of claim 1, wherein the concentration of said starting nitrogen-containing compounds in said anhydrous hydrogen fluoride is 20—50% by weight.

3. The process of claim 1, wherein said starting nitrogen-containing compounds are selected from the group comprising urea and products of decomposition thereof.

10 4. The process of claim 1, wherein said fluorination till the moment of appearance of nitrogen trifluoride in waste gases formed as a result of said fluorination is carried out preferably at a temperature of -20°C to -10°C and with the molar ratio of said fluorine to said starting nitrogen-containing compounds of not over 0.5.

15 5. The process of claim 4, wherein after the appearance of said nitrogen trifluoride in said fluorination waste gases the said fluorination is carried out preferably at a temperature of -15°C to 0°C.